Amendments to the Claims:

Listing of Claims:

Claim 1 (withdrawn): A control circuit for controlling an optical disk drive, the control circuit comprising:

a frequency detector for receiving an eight-to-fourteen modulation (EFM) signal and a data phase-locked loop (DPLL) signal;

a phase detector for receiving the EFM signal and the DPLL signal;

a low pass filter connected to the frequency detector and the phase detector for receiving outputs from the frequency detector and the phase detector and for outputting a first control signal;

a controller for monitoring the DPLL signal, calculating a target frequency, and for outputting a second control signal generated according to the target frequency to the VCO; and

a voltage-controlled oscillator (VCO) connected to the low pass filter and the controller for receiving the first control signal and the second control signal, and for generating the DPLL signal based on the first control signal when the optical disk drive is in a non-seek mode, and for generating the DPLL signal based on the second control signal when the optical disk drive is in a seek mode.

Claim 2 (withdrawn): The control circuit of claim 1 wherein during the seek mode, the controller calculates the target frequency and outputs the second control signal to the VCO to cause the VCO to output the DPLL signal according to the target frequency.

Claim 3 (withdrawn): The control circuit of claim 1 wherein the controller calculates the target frequency and outputs the second control signal to the VCO to cause the VCO to output the DPLL signal according to the target frequency when a rotation

speed of a spindle of the optical disk drive changes.

Claim 4 (withdrawn): The control circuit of claim 1 wherein the controller comprises:

a digital-to-analog converter connected to the VCO for outputting the second control signal; and

a frequency monitor for monitoring the DPLL signal.

Claim 5 (withdrawn): The control circuit of claim 1 further comprising a frequency divider connected to the VCO for dividing a frequency of the DPLL signal.

Claim 6 (withdrawn): The control circuit of claim 1 wherein the controller further sets charge pump currents of the frequency detector and the phase detector according to the target frequency.

Claim 7 (withdrawn): The control circuit of claim 1 wherein the controller determines the target frequency referencing a track number and a media type.

Claim 8 (withdrawn): The control circuit of claim 1 wherein the controller further sets an RF equalizer signal and a differential phase detector (DPD) equalizer signal according to the target frequency.

Claim 9 (withdrawn): The control circuit of claim 8 wherein the controller references tabulated data to correspond the target frequency with the second control signal, the RF equalizer signal, and the DPD equalizer signal.

Claim 10 (withdrawn): The control circuit of claim 1 wherein the optical disk drive operates in a constant angular velocity mode.

Claim 11 (withdrawn): The control circuit of claim 1 being incorporated in a compact disk (CD) drive or a digital versatile disk (DVD) drive.

Claim 12 (currently amended): A method for controlling an optical disk drive, the method comprising:

monitoring a data phase-locked loop (DPLL) signal;

generating a first control signal based on an eight-to-fourteen modulation (EFM) signal and the DPLL signal;

generating the DPLL signal based on the first control signal when the optical disk drive is in a non-seek mode;

~~calculating~~ predicting a target frequency of the DPLL signal for a target track when the optical disk drive is in a seek mode for track seeking;

generating a second control signal based on the target frequency; and

generating the DPLL signal based on the second control signal.

Claim 13 (original): The method of claim 12 further comprising:

detecting when a rotation speed of a spindle of the optical disk drive changes; and

generating the DPLL signal based on the second control signal when the rotation speed of the spindle of the optical disk drive changes.

Claim 14 (original): The method of claim 12 further comprising frequency dividing a frequency of the DPLL signal.

Claim 15 (original): The method of claim 12 further comprising setting charge pump currents of a frequency detector and a phase detector according to the target frequency.

Claim 16 (currently amended): The method of claim 12 wherein ~~calculating~~ predicting the

target frequency references a track number and a media type of the optical disk drive.

Claim 17 (currently amended): The method of claim 12 further comprising referencing a lookup table stored in the controller according to the predicted target frequency for setting an RF equalizer signal and a differential phase detector (DPD) equalizer signal.

Claim 18 (cancelled)

Claim 19 (currently amended): A method for controlling an optical disk drive, the method comprising:

monitoring a data phase-locked loop (DPLL) signal;

generating a first control signal based on an eight-to-fourteen modulation (EFM) signal and the DPLL signal;

generating the DPLL signal based on the first control signal when the optical disk drive is in a non-seek mode;

detecting when a rotation speed of a spindle of the optical disk drive changes;

~~calculating~~ predicting a target frequency of the DPLL signal for a target track when the rotation speed of the spindle changes;

generating a second control signal based on the target frequency; and

generating the DPLL signal based on the second control signal.

Claim 20 (new): A method for controlling an optical disk drive, the method comprising:

monitoring a data phase-locked loop (DPLL) signal;

generating a first control signal based on an eight-to-fourteen modulation (EFM) signal and the DPLL signal;

generating the DPLL signal based on the first control signal when the optical disk drive is in a non-seek mode;

referencing track number information to calculate a target frequency of the DPLL signal for a target track when the optical disk drive is in a seek mode for track seeking;

generating a second control signal based on the target frequency; and

generating the DPLL signal based on the second control signal.

Claim 21 (new): A method for controlling an optical disk drive, the method comprising:

monitoring a data phase-locked loop (DPLL) signal;

generating a first control signal based on an eight-to-fourteen modulation (EFM) signal and the DPLL signal;

generating the DPLL signal based on the first control signal when the optical disk drive is in a non-seek mode;

detecting when a rotation speed of a spindle of the optical disk drive changes;

referencing track number information to calculate a target frequency of the DPLL signal for a target track when the rotation speed of the spindle changes;

generating a second control signal based on the target frequency; and

generating the DPLL signal based on the second control signal.